

WHAT IS CLAIMED IS:

1. A compound comprising:
 - (a) one or more MHC-peptide complexes; and
 - (b) an antibody or a fragment thereof specific for a cell surface marker;wherein said MHC-peptide complexes comprise an MHC class I α chain or fragment thereof, a β_2 -microglobulin molecule or fragment thereof, and an antigenic peptide bound in the MHC groove; and
wherein said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.
2. The compound of claim 1, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.
3. The compound of claim 2, wherein said professional antigen presenting cell is a dendritic cell.
4. The compound of claim 3, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.
5. The compound of claim 1, wherein said cell surface marker is a cell surface marker of a tumor cell.
6. The compound of claim 1, wherein said cell surface marker is a cell surface marker of an epithelial cell.
7. The compound of claim 1, wherein said cell surface marker is a cell surface marker of a fibroblast.

8. The compound of claim 1, wherein said cell surface marker is a cell surface marker of a T cell.

9. The compound of claim 8, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

10. The compound of claim 1, wherein said antigenic peptide is derived from a cancer cell.

11. The compound of claim 1, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

12. The compound of claim 1, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

13. The compound of claim 5, wherein said antigenic peptide is derived from a cancer cell.

14. A compound comprising:

- (a) one or more MHC-peptide complexes; and
- (b) an antibody or a fragment thereof specific for a cell surface

marker;

wherein said MHC-peptide complexes comprise an MHC class I α chain or fragment thereof, a β_2 -microglobulin molecule or fragment thereof, and an antigenic peptide bound in the MHC groove; and

wherein said MHC class I α chain or fragment thereof of said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.

15. The compound of claim 14, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

16. The compound of claim 15, wherein said professional antigen presenting cell is a dendritic cell.

17. The compound of claim 16, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

18. The compound of claim 14, wherein said cell surface marker is a cell surface marker of a tumor cell.

19. The compound of claim 14, wherein said cell surface marker is a cell surface marker of an epithelial cell.

20. The compound of claim 14, wherein said cell surface marker is a cell surface marker of a fibroblast.

21. The compound of claim 14, wherein said cell surface marker is a cell surface marker of a T cell.

22. The compound of claim 21, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

23. The compound of claim 14, wherein said antigenic peptide is derived from a cancer cell.

24. The compound of claim 14, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

25. The compound of claim 14, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

26. The compound of claim 18, wherein said antigenic peptide is derived from a cancer cell.

27. A compound comprising:

- (a) one or more MHC-peptide complexes; and
- (b) an antibody or fragment thereof specific for a cell surface

marker;

wherein said MHC-peptide complexes comprise an MHC class II α chain or fragment thereof, an MHC class II β chain or fragment thereof, and an antigenic peptide bound in the MHC groove; and

wherein at least one chain or fragment thereof of said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.

28. The compound of claim 27, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

29. The compound of claim 28, wherein said professional antigen presenting cell is a dendritic cell.

30. The compound of claim 29, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

31. The compound of claim 27, wherein said cell surface marker is a cell surface marker of a tumor cell.

32. The compound of claim 27, wherein said cell surface marker is a cell surface marker of an epithelial cell.

33. The compound of claim 27, wherein said cell surface marker is a cell surface marker of a fibroblast.

34. The compound of claim 27, wherein said cell surface marker is a cell surface marker of a T cell.

35. The compound of claim 34, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

36. The compound of claim 27, wherein said antigenic peptide is derived from a cancer cell.

37. The compound of claim 27, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

38. The compound of claim 27, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

39. The compound of claim 31, wherein said antigenic peptide is derived from a cancer cell.

40. A compound comprising:

- (a) two or more MHC-peptide complexes;
- (b) a multivalent compound; and
- (c) an antibody or a fragment thereof specific for a cell surface

marker;

wherein said MHC-peptide complexes comprise either (i) an MHC class I α chain or fragment thereof and β_2 -microglobulin or fragment thereof; or (ii) an MHC class II α chain or fragment thereof and an MHC class II β chain or fragment thereof; and an antigenic peptide bound in the MHC groove;

wherein at least one chain or fragment thereof of said MHC-peptide complexes are linked to said multivalent compound; and wherein said multivalent compound is linked to said antibody.

41. The compound of claim 40, wherein said MHC-peptide complex comprises an MHC class I α chain or fragment thereof and β_2 -microglobulin or fragment thereof.

42. The compound of claim 40, wherein said MHC-peptide complex comprises an MHC class II α chain or fragment thereof and an MHC class II β chain or fragment thereof.

43. The compound of claim 40, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

44. The compound of claim 43, wherein said professional antigen presenting cell is a dendritic cell.

45. The compound of claim 44, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

46. The compound of claim 40, wherein said cell surface marker is a cell surface marker of a tumor cell.

47. The compound of claim 40, wherein said cell surface marker is a cell surface marker of an epithelial cell.

48. The compound of claim 40, wherein said cell surface marker is a cell surface marker of a fibroblast.

49. The compound of claim 40, wherein said cell surface marker is a cell surface marker of a T cell.

50. The compound of claim 49, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

51. The compound of claim 40, wherein said antigenic peptide is derived from a cancer cell.

52. The compound of claim 40, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

53. The compound of claim 40, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

54. The compound of claim 46, wherein said antigenic peptide is derived from a cancer cell.

55. The compound of claim 40, further comprising a cytokine.

56. The compound of claim 40, wherein said multivalent compound is avidin.

57. The compound of claim 40, wherein said multivalent compound is selected from the group consisting of streptavidin and chicken avidin.

58. The compound of claim 40, wherein said multivalent compound is a modified GCN4-zipper motif.

59. A polynucleotide encoding a compound comprising:
(a) one or more MHC molecules; and
(b) an antibody or fragment thereof specific for a cell surface marker;
wherein said MHC molecules comprise an MHC class I α chain or fragment thereof and a β_2 -microglobulin molecule or fragment thereof;
and wherein said MHC molecules are linked to the carboxyl terminus of said antibody or fragment thereof.

60. A polynucleotide encoding a compound comprising:
(a) one or more MHC molecules; and
(b) an antibody or fragment thereof specific for a cell surface marker;
wherein said MHC molecules comprise an MHC class I α chain or fragment thereof and a β_2 -microglobulin molecule or fragment thereof;
and wherein said α chain of said MHC molecules are linked to the carboxyl terminus of said antibody or fragment thereof.

61. A polynucleotide encoding a compound comprising:
(a) one or more MHC molecules; and
(b) an antibody or fragment thereof specific for a cell surface marker;
wherein said MHC molecules comprise an MHC class II α chain or fragment thereof and an MHC class II β or fragment thereof;
and wherein at least one chain or fragment thereof of said MHC molecules are linked to the carboxyl terminus of said antibody or fragment thereof.

62. A method of immunizing an animal, comprising administering to said animal a compound comprising:

- (a) one or more MHC-peptide complexes; and
- (b) an antibody or a fragment thereof specific for a cell surface

marker;

wherein said MHC-peptide complexes comprise an MHC class I α chain or fragment thereof, a β_2 -microglobulin molecule or fragment thereof, and an antigenic peptide bound in the MHC groove; and

wherein said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.

63. The method of claim 62, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

64. The method of claim 63, wherein said professional antigen presenting cell is a dendritic cell.

65. The method of claim 64, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

66. The method of claim 62, wherein said cell surface marker is a cell surface marker of a tumor cell.

67. The method of claim 62, wherein said cell surface marker is a cell surface marker of an epithelial cell.

68. The method of claim 62, wherein said cell surface marker is a cell surface marker of a fibroblast.

69. The method of claim 62, wherein said cell surface marker is a cell surface marker of a T cell.

70. The method of claim 69, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

71. The method of claim 62, wherein said antigenic peptide is derived from a cancer cell.

72. The method of claim 62, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

73. The method of claim 62, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

74. The method of claim 66, wherein said antigenic peptide is derived from a cancer cell.

75. A method of immunizing an animal, comprising administering to said animal a compound comprising:

- (a) one or more MHC-peptide complexes; and
- (b) an antibody or a fragment thereof specific for a cell surface marker;

wherein said MHC-peptide complexes comprise an MHC class I α chain or fragment thereof, a β_2 -microglobulin molecule or fragment thereof, and an antigenic peptide bound in the MHC groove; and

wherein said MHC class I α chain or fragment thereof of said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.

76. The method of claim 75, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

77. The method of claim 76, wherein said professional antigen presenting cell is a dendritic cell.

78. The method of claim 77, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

79. The method of claim 75, wherein said cell surface marker is a cell surface marker of a tumor cell.

80. The method of claim 75, wherein said cell surface marker is a cell surface marker of an epithelial cell.

81. The method of claim 75, wherein said cell surface marker is a cell surface marker of a fibroblast.

82. The method of claim 75, wherein said cell surface marker is a cell surface marker of a T cell.

83. The method of claim 82, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

84. The method of claim 75, wherein said antigenic peptide is derived from a cancer cell.

85. The method of claim 75, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

86. The method of claim 75, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

87. The method of claim 79, wherein said antigenic peptide is derived from a cancer cell.

88. A method of immunizing an animal, comprising administering to said animal a compound comprising:

- (a) one or more MHC-peptide complexes; and
- (b) an antibody or fragment thereof specific for a cell surface marker;

wherein said MHC-peptide complexes comprise an MHC class II α chain or fragment thereof, an MHC class II β chain or fragment thereof, and an antigenic peptide bound in the MHC groove; and

wherein at least one chain or fragment thereof of said MHC-peptide complexes are linked to the carboxyl terminus of said antibody or fragment thereof.

89. The method of claim 88, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

90. The method of claim 89, wherein said professional antigen presenting cell is a dendritic cell.

91. The method of claim 90, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

92. The method of claim 88, wherein said cell surface marker is a cell surface marker of a tumor cell.

93. The method of claim 88, wherein said cell surface marker is a cell surface marker of an epithelial cell.

94. The method of claim 88, wherein said cell surface marker is a cell surface marker of a fibroblast.

95. The method of claim 88, wherein said cell surface marker is a cell surface marker of a T cell.

96. The method of claim 95, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

97. The method of claim 88, wherein said antigenic peptide is derived from a cancer cell.

98. The method of claim 88, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

99. The method of claim 88, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

100. The method of claim 92, wherein said antigenic peptide is derived from a cancer cell.

101. A method of immunizing an animal, comprising administering to said animal a compound comprising:

- (a) two or more MHC-peptide complexes;
- (b) a multivalent compound; and
- (c) an antibody or a fragment thereof specific for a cell surface marker;

wherein said MHC-peptide complexes comprise either (i) an MHC class I α chain or fragment thereof and β_2 -microglobulin or fragment thereof; or (ii) an MHC class II α chain or fragment thereof and an MHC class II β chain or fragment thereof; and an antigenic peptide bound in the MHC groove;

wherein at least one chain or fragment thereof of said MHC-peptide complexes are linked to said multivalent compound; and wherein said multivalent compound is linked to said antibody.

102. The method of claim 101, wherein said MHC-peptide complex comprises an MHC class I α chain or fragment thereof and β_2 -microglobulin or fragment thereof.

103. The method of claim 101, wherein said MHC-peptide complex comprises an MHC class II α chain or fragment thereof and an MHC class II β chain or fragment thereof.

104. The method of claim 101, wherein said cell surface marker is a cell surface marker of a professional antigen presenting cell.

105. The method of claim 104, wherein said professional antigen presenting cell is a dendritic cell.

106. The method of claim 105, wherein said cell surface marker is selected from the group consisting of CD83, CMRF-44, CMRF-56 and DEC-205.

107. The method of claim 101, wherein said cell surface marker is a cell surface marker of a tumor cell.

108. The method of claim 101, wherein said cell surface marker is a cell surface marker of an epithelial cell.

109. The method of claim 101, wherein said cell surface marker is a cell surface marker of a fibroblast.

110. The method of claim 101, wherein said cell surface marker is a cell surface marker of a T cell.

111. The method of claim 110, wherein said cell surface marker is selected from the group consisting of CD28, CTLA-4 and CD25.

112. The method of claim 101, wherein said antigenic peptide is derived from a cancer cell.

113. The method of claim 101, wherein said antigenic peptide is derived from an infectious agent or from infected cells.

114. The method of claim 101, wherein said antigenic peptide is derived from the target tissue of an autoimmune disease.

115. The method of claim 107, wherein said antigenic peptide is derived from a cancer cell.

116. The method of claim 101, further comprising administering a cytokine to said mammal.

117. The compound of claim 101, wherein said multivalent compound is avidin.

118. The compound of claim 101, wherein said multivalent compound is selected from the group consisting of streptavidin and chicken avidin.

119. The compound of claim 101, wherein said multivalent compound is a modified GCN4-zipper motif.

119. The compound of claim 101, wherein said multivalent compound is a modified GCN4-zipper motif.